FOREIGN SUMMARY—METALS AND MARKETS.

One of Bishop's American floating derricks having been put up on the Thames, in London, it has furnished a theme of admiration to several of our cotemporaries of that city. To test its powers, a Norwegian vessel of 900 tuns was recently laid alongside of it, and three chains were rapidly passed under the bottom and connected with the lifts of the derrick. When all was secure the machinery was set in motion, and the vessel was steadily lifted from the water at the rate of about a foot per minute. When raised 20 feet, a small steamer of sixty tuns was fastened beneath her, and both vessels were raised high into the air, presenting a most singular appearance. There was scarcely any oscillation as the two vessels hung, and the weight of both, with a counterbalancing weight of water pumped into the derrick on the other side, only brought her down about 13 inches lower in the water. The derrick is also provided with locomotive steam-power, which enables her to move with any vessel she has raised, at the rate of three or four miles an hour. The greater part of this derrick is of iron, and it is equal to raising a weight of 1,000 tuns from the water. Its introduction into England is likely to be very successful.

A new fossil has been discovered in lignite, near Banbury. It is found in fragments of the size of a man's fist, of a light yellow or greenish hue, translucent, somewhat ductile and elastic, and with a density of 0·968. It melts at 225 degrees centigrade, and at 300 degrees a brownish oil is distilled from it. It burns without leaving any residue; ether dissolves six and alcohol four per cent of it.

A merchant of Russia announces the sale, in his warehouses at Odessa, Nicolaieff and Sevastopol, of 7,351 tuns of iron and cast-iron, coming from projectiles picked up in the Crimea after the war, which gives some idea of the prodigious consumption of shot and shells in the siege of Sevastopol.

The *South Australian Gazette* states that the total quantity of gold brought from the mines by escort up to the 15th of April, 1859, was 623,300 ounces, against 629,918 ounces during the same period in 1858. The quantity exported this year has been 643,878 ounces, making the total quantity exported since the discovery of the gold fields, 18,253,620 ounces, representing, at £4 per ounce, the enormous sum of £73,014,480.

The *Great Eastern* (formerly *Leviathan*) steamship is rapidly approaching completion. A whole army of workmen are now busily engaged in getting forward her internal fittings. Half of her six masts are up and rigged. The two paddle-boxes weigh about 600 tuns. The finishing of the vessel was given, by contract, to Scott Russell for £125,000 (over $600,000), to be completed by Sept. 4, and a premium of £1,000 per week for earlier completion, but £10,000 a week of penalty for every week's delay. For running down other vessels, in case of war, her sharp bows are strengthened by three iron decks forward, which perform the office of transverse stays, divided into water-tight bulkheads. The power of the engines will be equal to 12,000 horse, and it is expected that her speed will be 23 miles per hour. Such a mass moving at such a velocity could run down all the ships in any war fleet, one after another, with the greatest ease. Her trial trip will probably take place about the end of next month.

An alarming illustration of the dangers attending the absence of communication between railway passengers in the cars and the engineer recently took place on a train running between Manchester and Chester. The passengers' luggage in the first-class car took fire and spread rapidly, while the engine sped on with tremendous velocity. The passengers were in a dreadful state of excitement, and could not give an alarm either to guard or engineer. Fortunately, the latter looked behind at a hat that was lying on the track and saw smoke issuing from the roof of the car, when he at once put down the brakes, stopped the train, and the fire was put out. A passenger writes:—"I never saw such a scene in my life; if it had been an express train we should all have been burned to death." It is really stupid, in conducting the trains on English railways, that a chain or rope, for ringing a bell, as on American railroads, is not used to communicate between the cars and the engineer.

The number of steam vessels registered in Great Britain s 1,854. Their aggregate tunnage is 680,433 tuns, exclusive of engine room, which amounts to 441,878 tuns; total, 1,122,331 tuns.

There has been a great decline in the pig-iron trade of Great Britain during the past year, and a rapid increase of that in Prussia and Belgium. There was an increase in the exports of railway iron to America, India and Prussia in June.

By the report of the Board of Trade, just published, for the month of May, there was a great increase in the exports of hardware to the United States and other countries. The total value of exports was £354,489 against £280,974 for the same month last year.

Last week the cotton market at Manchester and Liverpool appeared to be on the rise; this week it is rather fluctuating, although there has been no great downward tendency. 50,340 bales are reported to have been sold at Liverpool, at a fall of about ⅛ per lb. The price of American flour was about the same, with but little prospects of an advance, as the crops were very promising.

American securities were steady and prices firm:—

United States 6 per cent bonds, 1868	97½	a	98½
United States 5 per cent bonds	92¾	a	93¼
Alabama 5 per cent bonds	75	a	77
Kentucky 6 per cent bonds	92	a	94
Maryland 5 per cent State bonds	93	a	95
Massachusetts 5 per cent State bonds	100	a	101
Mississippi Union Bank 5 per cent bonds	14	a	16
Ohio 6's	98	a	109
Pennsylvania 5 per cent bonds	82	a	84
Pennsylvania 5 per cent bonds, 1877	84	a	86
South Carolina 5 per cent bonds, 1866	83	a	85
Tennessee 6 per cent bonds	80	a	82
Virginia 6 per cent bonds, 1886	83	a	85
Virginia 5 per cent bonds, 1888	83	a	85
Boston 4½ per cent bonds	89	a	91
Montreal 6 per cents, 1856-65	80	a	82
Illinois Central Railroad 7's, 1875	78	a	80
Illinois Central 6 per cent, 1875	75	a	78
Illinois Central Railroad 7's, 1850, Freeland	86	a	88
Illinois do., shares ... dis.	34	a	32
Michigan Central 8 per cent, 1869	82	a	84
Michigan Central Shares	40	a	45
N. Y. Central 6 per cent, not convertible, 1883	82	a	85
N. Y. Central 7's, convertible, 1864	93	a	95
N. Y. Central Shares	68	a	70
N. Y. and Erie 7 per cent 3d mortgage bonds	55	a	58
N. Y. and Erie 7 per cent shares	7	a	9
Panama 7 per cent bonds, 1859	100	a	102
Panama 7 per cent bonds, 1865	96	a	97
Pennsylvania 6's, 1st mortgage, 1880	90½	a	91½

Our usual table of the price of metals is omitted this week. We will state, however, that rails have advanced 5s. per tun and Scotch pig-iron 6s. The market was firm. Considerable was done in spelter at £21 per tun. There has been a considerable advance on tin—no less than £13 per tun in one week. Banca is quoted at £146 and fine Straits at £143 per tun; holders were not disposed to sell. Tin plate was in good demand. Copper and lead were without change.

If those who are not acquainted with British currency will value £1 at $4.84 and 1s. at 24 1-5 cents, they will obtain a comparative idea of the prices in sterling and United States currency. We are well aware that a sovereign is set down in our works on finance at $4.44, but this is not its market value in this city.

New York Markets.

COAL.—Foreign cannel, $9; Anthracite, from $4.50, $4.75, to $5.50

CORDAGE.—Manilla, 8½c. a 9¼c. per lb.

COTTON.—The sales were not so favorable this week, and the prices have somewhat fluctuated. Good ordinary Upland, Florida and Mobile, 10½c.; Texas, 11c.; Middling fair from $13½c. to 14¼c.

COPPER.—There has been a considerable advance in the prices of this metal. Lake Superior ingots at 23c. per lb. for cash; sheathing, 26c. 125,000 lbs. of Lake and 110,000 lbs. of Baltimore were sold.

FLOUR.—There has been a slight upward tendency of prices. Southern flour has been buoyant, but on the whole, between one day and another, the market may be set down as fluctuating. Genesee brands, $5.25 a $8; Ohio choice, $5.50 a $7.75; common brands from $4 15 up to $6.

HEMP.—American undressed, $140 a $150; dressed from $190 a $210. Jute, $95 a $90. Italian scarce. Russian clean, $210 a $215. Manilla 6⅝c. a 6¾c. per lb. A dull market and a bad sign for our shipping interests.

INDIA-RUBBER.—Para, fine, 55c. a 57½c. per lb.; East India, 37c.

INDIGO.—Bengal, $1 a $1.65 per lb.; Manilla, good to prime, 55c. a $1.10; Guatemala, $1.05 a $1.25.

IRON.—Anthracite pig, $23 a $24 per tun; Scotch, $24 to $24.50; Swedish bar, ordinary sizes, $88 a $90; English refined, $53 a $54.50; English common, $43 a $45. Russian sheet, first quality, 11½c. a 12c. per lb.; English, single, double and treble, 3⅜c. a 3⅞c. In Philadelphia, American pigs are quoted at $23 a $23.50 for No. 1 and $22 a $22.50 for No. 2. Charcoal blooms at $65.

LEAD.—Galena, $5.80 per 100 lbs.; German and English refined, $5.70; bar, sheet and pipe, from 6¼c. to 7c.

LEATHER.—Oak slaughter, light, 34c. a 36c. per lb.; Oak, heavy, 33c. a 35c.; Oak, crop, 40c. a 42c.; Hemlock, middle, 25½c. a 26½c.; Hemlock, light, 25c. a 25½c.; Hemlock, heavy, 23½c. a 24½c; Patent enameled, 16c. a 17c. per foot, light. Sheep, morocco finish, $7.50 a $8.50 per dozen. But a moderate business in oak and hemlock, and a slight decline in the prices of some classes. No change worth noting.

NAILS.—Cut are quiet but steady at 3c. a 3¾c. per lb. American clinch sell in lots, as wanted, at 5c. a 6c.; wrought foreign, 3c. a 3½c.; American horseshoe, 15c.

OILS.—Linseed, city made, 60c. per gallon; whale, bleached spring, 54c. a 56c.; sperm, crude, $1.20 a $1.27; sperm, unbleached spring, $1 35; lard oil, No. 1 winter, 85c. a 90c.; extra refined rosin, 30c. a 40c.; machinery, 59c. a 100c.; camphene, 45c. a 47c.; coal, refined, $1.12 a $1.50.

RESIN.—Common, $1.77½ per 310 lbs. bbl.; No. 2, &c., $1.80 a $2.12½; No. 1, per 280 lbs. bbl., $2.25 a $3; white, $3.25 a $4.50; pale, $4.50 a $6.25.

STEEL.—English cast, 14c. a 16c. per lb.; German, 7c. a 10c.; American spring, 5c. a 5½c.; American blister, 4½c. a 5½c.

TALLOW.—American prime, 10¾c, to 11c., per lb.

TIN.—Banca, 34c. a 34½c.; Straits, 32c. a 32½c.; plates, $7.50 a $9.87½ a $10.08 per box. The holders of this metal seem not to be anxious to see. Banca has still an upward tendency.

TURPENTINE.—Crude, $3.62½ per 280 lbs.; spirits, turpentine, 44½c. a 45½c. per gallon.

ZINC.—Sheets, 7½ a 7¾ per lb.

The foregoing rates indicate the state of the New York markets up to Aug. 4.

HORSESHOE NAILS.—Mr. J. Coggeshall, agent of the American Horseshoe Nail Co., Providence, R. I., informs us that the price of their nails per pound, delivered at Boston, New York, Philadelphia and Baltimore, is 14½ cents.

ALBANY LUMBER MARKET, AUG. 3.

We learn from the Albany "Journal" that there was some improvement in the lumber trade during the week preceding the 3d inst. The demand is not confined to any single locality, but is scattered throughout the northern States. Some pine has been bought up for Virginia, but nothing further South. The receipts during the month of July have been quite large, footing up 47,163,662 feet of boards and scantling against 35,928,167 during the corresponding month of last year. These figures show an excess of over eleven millions of feet, and they are corroborated by the appearance of the yards in the district. The yards are all fully stocked, and the business during the month having been moderate, the receipts have greatly exceeded the shipments. The assortment of pine, spruce and hemlock is good, while hard woods can be found more plenty and the assortment greatly improved.

There is very little alteration to notice in our prices current, Two-inch spruce plank have slightly improved in value, and white wood chair plank has depreciated. We quote as follows:—

Pine, clear, per M	$23 00	a	$25 00
Pine, 4th quality	23 00	a	25 00
Pine, select box	19 00	a	21 00
Pine, Chemung box	16 00	a	17 00
Pine, box	13 00	a	15 00
Pine, clear, ⅝	27 00	a	29 00
Pine, 4th quality, ⅝	20 00	a	22 00
Pine, select, ⅝	17 00	a	19 00
Pine, box, ⅝	10 00	a	12 00
Pine floor plank, good, 1¼ inch, each	00 23	a	00 27
Pine floor plank, 2d quality	00 19	a	00 22
Pine floor plank, culls	00 11	a	00 15
Spruce boards	00 11	a	00 12½
Spruce floor plank	00 14	a	00 15
Spruce plank, 2 inch, good	00 21	a	00 22
Pine tally boards, good	00 16	a	00 18
Pine tally boards, 2d quality	00 12	a	00 15
Pine tally boards, culls	00 8	a	00 11
Hemlock boards	00 9½	a	00 10½
Hemlock joist, 3 by 4	00 10½	a	00 11
Hemlock joist, 4 by 6	00 21	a	00 23
Hemlock wall strips, 2 by 4	00 7½	a	00 8
Clap boards, pine, clear, per M	20 00	a	00 00
Clap boards, pine, 2d quality	15 00	a	17 00
Ash, good	25 00	a	28 00
Ash, 2d rate	15 00	a	18 00
Oak	25 00	a	28 00
Maple joists	16 00	a	17 00
Black walnut, good	40 00	a	45 00
Black walnut, 2d quality	25 00	a	28 00
Black walnut, ⅝-inch	35 00	a	40 00
Sycamore, 1-inch	25 00	a	00 00
Sycamore, ⅝-inch	20 00	a	00 00
Cherry, good	40 00	a	45 00
Cherry, 2d rate	20 00	a	30 00
White wood chair plank	35 00	a	38 00
White wood chair plank, 1-inch	21 00	a	25 00
White wood chair plank, ½-inch	15 00	a	17 00
Shingles, 1st quality, shaved, pine	5 00	a	5 50
Shingles, 2d quality, shaved, pine	4 00	a	4 50
Shingles, common, shaved, pine	2 00	a	3 00
Shingles, 1st quality, sawed, pine	0 00	a	3 50
Shingles, 2d quality, sawed, pine	2 75	a	3 00
Shingles, common, sawed, pine	2 00	a	2 50
Shingles, sawed, hemlock	2 00	a	2 20

NEW YORK ASSAY OFFICE.

Statement of business at the United States Assay Office at New York for the month ending July 30, 1859:

Deposits of Gold:—		
Foreign Coins	$12,000 00	
Foreign Bullion	8,000 00	
United States Bullion	137,000 00	
		$157,000 00
Deposits and purchases of Silver:		
Foreign Coins	$33,400 00	
Foreign Bullion	6,400 00	
United States Bullion (contained in gold)	1,900 00	
Old Coins	1,000 00	
Lake Superior	1,200 00	
		43,900 00
Total deposits, payable in bars		155,000 00
Total deposits, payable in coins		46,500 00
		$201,500 00
Gold Bars Stamped		$296,795 68
Transmitted to U. S. Mint, Philadelphia, for coinage		57,720 56

Although so much coal, lard and resin oils are now manufactured, the whaling business is better at present than ever it was before, and New Bedford (Mass.), the great whaling port, is at present exceedingly lively with shipping.

California wool has become quite an article of commerce in our marts. 30,000 lbs. of it were sold last week for 24c. a 32c. per lb., according to quality.

Many persons have inquired of us "What is spelter?" It is the commercial name for unmanufactured zinc.

Horns are subjects of a considerable commerce among us 15,000 of them, once the property of oxen that grazed on the Rio Grande, in South America, were sold in this city last week.

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VOL. I., No. 2.....[NEW SERIES.].....*Fifteenth Year.*

NEW YORK, SATURDAY, JULY 9, 1859.

THE FATHERS OF PHILOSOPHY.—II.

NE lash of the whip, one plunge of the spur —or better, one kind word — is enough to start the willing steed to action, and to give free vent to that glorious motion which, to the accomplished rider, produces in him that centaur-like feeling, and is the hight of his joy. So was it with Greece. No sooner had Thales set the example, than physical investigation and subtle reasoning seemed to be the very thing that the Grecian mind had been wanting, and philosophy really became "the rage." Followers quickly gathered around the old philosopher or embraced his doctrines, and many of these Ionic thinkers became truly famous, the immediate successors of Thales, in chronological order, being

ANAXIMANDER AND ANAXIMENES.

They were both fellow-townsmen of Thales, being born in Miletus, the former in 610 B. C. and the latter in 556 B. C., or thereabouts, for we are not positive as to their exact birth-place or date. It has been inferred that Anaximander was at one time an instructor of youth, for there is an anecdote recorded of him which would lead us to make such a conjecture. Being laughed at for singing or reciting his verses ill, he said, "We must do better for the sake of the boys." This idea is strengthened by the fact that he was the first who taught philosophy in a public school; Thales having been satisfied to enunciate his discoveries and doctrines to a select and appreciative few. He made a connected series of geometrical truths, and was the first who marked out the surface of the earth and divided the land and water on an artificial globe. But grander than all and greater than all, was his appreciation and application of Cadmus' invention, the art of writing, for he laid aside the defective method of oral tradition and committed the principles of natural science to writing. It has been asserted that he invented the sun-dial, but we think that Herodotus was right in assigning it to the Babylonians, although he may have used a gnomon to verify Thales' observations.

An old encyclopedia which we have consulted, says: "It is related of him that he predicted an earthquake; but we need not say that, as this is impossible, the relation must be fabulous." Now we know that many earthquakes and volcanoes are periodic, and therefore if Anaximander knew, from observation or tradition, this fact, it would not be quite so impossible as our authority imagines. The principles that he taught were, that all things came from infinity, and terminate in it, and that the universe, though changeable in its parts, is immutable as a whole. He believed the stars to be gods, or inhabited and animated by portions of divinity. The sun he stated to be twenty-eight times larger than the earth, which was not *quite* true, as the sun is thirteen hundred thousand times greater in bulk than our little planet. This great man, who had done much to introduce method into the philosophy of his day, and who had originated many ideas, died at the age of sixty-four, leaving behind him a sect or body of followers who have been called Anaximandrians.

The Anaximenes who interests us, it must be recollected, is not the Greek rhetorician and historian who was the instructor of Alexander the Great, and who wrote the life of that great conqueror and his father, Philip of Macedon; but ours is the one who expounded more fully than Thales had done his philosophical doctrines to the young and old of Greece. The astronomy which he taught sounds old in our ears, but when we recollect that the telescope was unknown, and all their observations with the naked eye were colored and refracted by and through a superstitious medium, we shall be surprised at the boldness of his surmises. We can imagine him standing on the steps of some classic temple, or sitting in some quiet grove with an admiring class around him, his splendid eye and finely-chiseled features lighted with enthusiasm, as he, extending forth his right arm through the folds of his ample robe, exclaims, "See you yon crystal plane in which the fiery stars are ever and immovably fixed, in which the round sun and moon burn their perpetual fires, and the earth, like a plane tablet, rests on the buoyant air? The ether that supports us, makes us; for mind, which is the essence of all things, is ether, and all the phenomena of nature, fire, earth and water, proceed from it or are made by it, by rarefaction and condensation!" This was his teaching, and we have imagined it to be his speech, by which he did not give much impetus to discovery, but rather devoted his life to enforcing what was already known and believed. The date of his death is uncertain, but some think he lived to a good old age.

PHOTOGRAPHY AND THE ARTS.

When Daguerre made the discovery of transferring the likenesses of living beings to tablets of metal by a pencil of sunlight, it was justly hailed as one of the most extraordinary inventions ever developed. At first, and for several years afterwards, this art was confined to obtaining pictures of persons, but it was at last delivered from this limited circle of application. The employment of prepared paper (the invention of Fox Talbot) for taking pictures by the solar beam, was found to be a great improvement. The paper being more flexible in its nature than the metal plate, the artist soon learned to range the woodland and the wild with his portable apparatus, and take pictures of rural scenery as well as those of persons. By this art he is now enabled to carry home with him the indelible print of the glassy lake which he saw sleeping beneath the noontide sun, a copy of the ivy-clad cottage on the bank of the river, and pictures of the green fields and forests through which he roamed.

One of the most recent and useful applications of this art is that of obtaining copies for lithographic printing. Owing to the vast number of banks in our country, and the great variety of their notes in circulation, an extraordinary amount of temptation is presented to the forger; counterfeit bills, therefore, of all denominations, are continually appearing; and although their authors are detected in one place, they scem, like the dragons' teeth of ancient story, to be continually bringing forth a fresh crop in some other form. Photography has been applied to furnish a key for detecting these fraudulent bills. A new weekly periodical, published by Wm. Cousland & Co., Nassau-street, this city, contains several plates of such bills, and it is therefore a mirror whereby they may be examined. The counterfeit bills are copied by photography on prepared stones, and from these lithographic prints of the bills are obtained at a comparatively low cost. Of the utility of such a weekly periodical there can be no question, as its first number has *fac-similes* of the bills of no fewer than one hundred and forty-four banks in Massachusetts alone. When this is the case, how great must be the number of counterfeit notes on all the banks in the country, now in circulation!

Another recent and useful application of this art is that of taking copies of machines, in whole or in parts. Some of our tool and machine manufacturers take photographic views of every machine which they make; these not only serve as records of their products, but the pictures are sent to persons who wish to order similar machines, so as to give them a clear idea of the article which they may wish to purchase. Several machine-shops, like that of Messrs. Hoe & Co., in this city, have a photographic gallery connected with their drafting department; and we recently examined some pictures taken at Mr. Sellers' celebrated tool manufactory in Philadelphia, which were really photographic gems. They resembled shaded drawings of a high order, and conveyed an excellent idea of the form and construction of the tools represented.

We have lately examined another new and useful application of photography, namely, that of copying works of art, such as silver-ware and other like manufactures. Thus, Messrs. J. A. & F. Dunworth, No. 395 Broadway, manufacturers of silver-plated ware, have a photographic gallery connected with their rooms, for copying their designs, which can be sent to any part of the country, so that a true idea may be obtained of the form of any article which they manufacture; the copy can be transmitted a thousand miles in a letter, and a purchase made from the picture almost as safely and satisfactorily as from seeing the article itself.

As we have, in former numbers, described the application of photography to engraving, we need not further allude to this at present. We have recently heard that it is now applied by the designers of new patterns for calico-printers to multiply copies at a small expense. The new design is copied by photography, which gives all the lights and shadows of the pattern, and it only requires to be colored afterwards. Formerly copies were only obtained by drawing the whole pattern by hand, which was a tedious method in comparison with sunlight drafting.

The field for new applications of this useful and beautiful art is still extensive. The facts which we have set forth will no doubt suggest to others new adaptations of it, each of equal importance to any which have yet been successfully prosecuted.

"VERY ILL."

We are sorry for you and you have our sympathy, no matter when or where any of you may have occasion to use the above expression, and to prove that we do pity all who may be laid on a bed of sickness we will give a few common-sense hints how to hasten recovery. The first grand requisite is patience, a quiet and calm endurance of suffering, and a resignation to the temporary loss of health. Then comes cheerfulness, not of the sick alone, but of all around; a cheerful countenance smiling over the sick bed can do more good than gallons of physic. The mind of the invalid should be kept diverted from the ailment, and funny, interesting matter should be read aloud for some time every day. The sick room should be kept a pattern of cleanliness. It should be well ventilated, cool and light, and lastly, the doctor should be chosen for his jollity and good humor as much as for his scientific attainments; and, we had nearly forgotten to mention it, never put a sick person in a curtained bed; let them, no matter what the ailment be, have plenty of the free life-giving air, and if the light be too strong a white shade can be hung before the window, but put none aronnd the bed. A person who is sick should always, if possible, sleep alone, and as light a covering as is consistent with warmth is the best. By following these rules and taking your potions at the proper times, as ordered by the doctor, should any of you still continue ill, but able to be about, we recommend that you set out on a canvassing tour in your neighborhood to procure subscribers for the SCIENTIFIC AMERICAN. The exercise, with the satisfaction that you are doing good, will restore you to perfect health. Try it.

REPOSITORY OF THE ARTS AND SCIENCES.—The Editors and Publishers of the SCIENTIFIC AMERICAN desire to make their journal in every sense a complete repository of useful information, and to this end they earnestly solicit information from the Workshop, the Manufactory, the Laboratory, the Farm, and from all other sources likely to afford interest to an inquiring, thinking, intelligent class of readers. The SCIENTIFIC AMERICAN is, *par excellence*, the journal of the Inventor, Mechanic, Manufacturer, and Man-of-science; they have, therefore, a right to be heard through its columns, and are cordially invited to send in their contributions. We hope they will send us, from time to time, accounts of their discoveries; and such other items of interest as are occurring in their respective locations and in keeping with the character of this journal.

STEAM-PLOWING.—The steam plow of Mr. J. Fawkes, of Lancaster, Pa., which lately met with an accident at Philadelphia, as recorded in a former number, will be repaired in due season, as we have been informed, and exhibited at the Illinois State Fair, to be held in the month of September next.

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VOL. I., NO. 3.....[NEW SERIES.].....*Fifteenth Year.*

NEW YORK, SATURDAY, JULY 16, 1859.

THE FATHERS OF PHILOSOPHY.—III.

ROUDLY the conqueror plants his foot upon the vanquished land; proudly the mariner regards his craft when safely harbored after some rough and perilous voyage; and with a wholesome and honest pride do children in the streets recall their city's mighty dead. The feeling of success in the one leads us to admiration of the means in the other, and the climax is the applauding voice of posterity on the actor and the means at his command. If, as we do, we adore, with all the fullness of hero-worship that is within us, the memories of the great soldiers who have, from time to time, decorated their race or devastated countries, or the great poets who have sung sweetly to the entranced ear of genial man, how much more should we honor the remembrance of those who have lived lives of peace, inculcating honesty into men, and, by their example and teaching, improving humanity through all future ages! Should we not forever hold them in sweet memory's cells, and keep the recollection of them ever green? The voice of all mankind will respond "we should!" And it is with this idea and this respect that we proceed to enmerate the works and tell the story of the life of the founder of the Italic School.

PYTHAGORAS.

While the people of Athens were worshiping "THE UNKNOWN GOD" on Mars Hill, and the population of Ephesus cried "Great is Diana of the Ephesians!" and six centuries and a half before Saint Paul, with his logical reasoning, told the inhabitants of both cities abont the true God and the way of salvation, there was born on the island of Samos, not far from the latter city, the man Pythagoras, who was in some measure to prepare the Grecian mind for the reception of Paul's logic and wisdom. At eighteen years of age, in the year 568 B. C., he had, like most youths, a desire to travel and study the philosophies and acquire the learning of foreign lands. His first point was Egypt, where, by the interest of the king, Amasis, and after submitting to certain rites, he was admitted into the colleges of the priests. He passed twenty-two years in this country and then visited other lands, but the route he took or the exact countries he visited is so wrapped up in contradictions that it must be left in doubt. On returning to his native island he attempted to open a school to teach geometry, but the Samians were either too stupid or too lazy to profit by his instructions, and he relinquished his design. He then visited Delos, and after presenting cakes to Apollo, he pretended to receive from the god a code of doctrines for the government of men, and with the same purpose he repaired to Crete, and was initiated into the most sacred mysteries of Greece. It was in Greece, at Phlius, that he first assumed the title of "philosopher," or lover of wisdom, in modest distinction to the title of "sophist," or wise man, which had been conferred upon him.

Returning to Samos, he went into a semi-circular building used by the Samians as a place of public resort, and delivered, with assumed authority, the doctrines of his sect, and in a secret cave instructed his more chosen followers. But as his discourses had too much in them of individual freedom, he had to leave the island, and he passed over to the city of Crotona, now Otranto, in Italy, on the gulf of Tarentum, and it was from this that his sect received the title of the Italic School. The inhabitants of Crotona were licentious and corrnpt in the extreme, but he quickly changed them into a sober and frugal people; and it is said that six hundred persons were prevailed upon to submit to his severe discipline, which required that they should throw all their possessions into the common stock, and acquire a habit of silence, docility and gentleness. After this the fortitude and self-command of the candidate for admission to the knowledge of his more profound doctrines had to submit to a long course of severe abstinence and rigorous exercise; and to teach them humility he exposed them for three years to the jeers, contempt and contradiction of their fellows. No animal food was eaten by him, and he abstained from pulse and beans. Clothed in a flowing white robe, with a crown of gold upon his head, he preserved a majesty of demeanor and a commanding gravity, and by these means was looked up to as a superior being. This we may honestly believe was not charlatanry on the part of Pythagoras, but as he lived in a superstitious age, and had to talk to a superstitious people, he adopted these accessories to obtain a respectful hearing. He married Theano, of Crotona, and had two sons, Telaugas and Mnesarchus, who took charge of the school after his death, which happened in the Temple of the Muses, at Metapontium, B. C. 497, whither he had fled when persecuted for urging the people to the strenuous assertion of their rights, against the encroachments of their tyrannical governors.

Some precepts of his sect are good, such as:—"Above all things, govern your tongue." "Quit not your station without command of the general." "Remember that the paths of virtue and vice resemble the letter Y." Persius, speaking of this latter precept, said:

> "There has the Samian Y's instructive make,
> Pointed the road thy doubtful foot should take:
> There warned thy raw and yet unpractised youth,
> To tread the rising right-hand path of truth."

We would not exceed our usual space, and so will defer our account of his musical and other discoveries until next week.

THE HAND.

The hands are *striking* objects of power and beauty. The ancient masters of painting—Michael Angelo, Raphael, Barry, and others—paid great attention to the painting of the hand, and always instilled into them a power of expression which harmonized with the features of the person represented. No one who has examined the works of these great men has failed to recognize this marvelous characteristic in their paintings; but modern artists generally concentrate all their genius upon the excention of the face and form, to the neglect of the *minutice* of the hands or arms; hence, many historic personages are painted with their own faces, but with the hands of other individuals quite unlike them in style or character. Great orators and actors have paid much attention to the effect which judicious movements of the hands always prodnce upon an audience, in the display of some passionate touch of feeling.

We have now in mind a clergyman whose beautiful hand and grace of gesture have given him an enviable reputation. He is the admiration of the ladies; and a female friend of ours once said to us that, if she had been born deaf, a visit to his church would always have been a rich intellectual treat to her; for he had such a handsome hand, and his gestures were so graceful and expressive, that they conveyed as much significance of thought to her as his language did to the rest of the audience.

The idea of beauty is not a mere whim of the mind, like the indulgence of a passion for dress, such as jewelry, laces, cashmere shawls, &c.; but it is based upon certain fixed principles, and does not change along with the ever-varying alterations in shapes and materials of wearing-apparel and ornaments that are constantly occurring in Paris, London and New York. As the effect of hands in pictures is rendered more or less pleasing to the eye in proportion to the degree of harmony existing between all the limbs and features of the figure, so the corporeal beauty of every living man or woman may be much increased by proper culture; the best cosmetics being cleanliness, air and exercise. In the finger-nails, for instance, when properly taken care of, there is much of beanty; but when neglected, they become, like weeds in a garden—a positive disfigurement, betraying an absence of taste and refinement. To keep them in proper order, the finger-nails should be cleaned daily and cut as often as once every two weeks; and these operations should be done with a sharp pen-knife, which makes a much smoother cut than a pair of scissors. A pretty hand may be much improved in appearance by careful attention to the nails, and even a hand which is not of the most graceful type may be rendered more endurable to the eye. If the hands and nails are not kept clean, and closely trimmed, their adornment with diamonds and emeralds will not render them beautiful to the eye of good taste.

PHOTOGRAPHY AND THE ARTS.

Another new application of photography has been brought to our attention, this week, in the *American Journal of Photography*, which contains the specification of a patent granted in England to G. Baxter, of London, for a new method of coloring photographic pictures. The coloring of lithographic and calico prints is executed with a separate block, roller or stone for each color, each block, &c., being so engraved that it only touches the parts of the pattern where the specific color is to be laid. The new application embraces this arrangement for putting the colors on pictures taken by photography. The engraved blocks for coloring such pictures are worked in a press.

In our last issue we stated, in reference to the character of the illustrations of bank-bills in "Hewet's Encyclopedia of American Bank-Note Currency," (published by Wm. Cousland & Co., this city) that the number then before us contained *fac-similes* of counterfeits upon 144 Massachusetts banks. We ought to have stated that it contained 144 illustrations of *genuine* bank-bills of banks in Boston; it being the publishers' intention to arrange the whole work in alphabetical order, commencing with Massachusetts, then giving the banks of the other New England States, and then those of the middle, western and southern States and Canada, in regular succession, each weekly number containing 144 specimens of good bills. We were led to make the erroneous statement above alluded to from a casual glance at the index of the first number, which enumerated, as we now find, only the counterfeits existing on certain genuine bills therein engraved. So far as the description given referred to photography applied to the detection of counterfeit bank-notes, the principle is the same—the specific object of the article was to point out a new application of the photographic art.

THE PICTORIAL WEBSTER'S DICTIONARY.—We have received the above work from the publishers, G. & C. Merriam, of Springfield, Mass., and it fully answers all our expectations. In looking through its pages, even cursorily, we soon discover the value of the pictorial additions; for thousands of obscure words, whose meaning can only be faintly explained by great circumlocution of definitions, stand clearly forth in their significance and use when the illustrations place their practical applications before the eyes of the reader. We did think that it would be of especial benefit to young folks, but we now think (to make an Hibernicism) that it will be of especial benefit to everybody. A valuable feature is the table giving the pronunciation of the names of distinguished persons, as there is nothing more awkward and grating to the ear as to hear the names of giants in science and literature wrongly prononnced. Nearly 10,000 new words have been added, and altogether it may justly claim the proud position of the king of dictionaries.

BLANCHARD'S STEAM-BOILER.—We learn from the *Eastern Argus*, of Portland, Maine, that a trial-trip has been made at that place with the steam-tug *Tiger*, fitted up with Mr. Blanchard's improvements (illustrated and described on page 412, Volume XIII., SCIENTIFIC AMERICAN), and the result was a saving of nearly one-half the fuel that would have been used had it been consumed in the ordinary manner.

NOT QUITE A HUMBUG.—The Vermont gold discoveries are not all humbug. A few men are regularly at work (according to the Springfield *Republican*, which has sent a special reporter there) and gold in small quantities is the result of their labors. One man with another to help him, got $2.75 in a day, and a person named Hankerson, a regular miner, had $5 or $6 in his troughs, as the result of a day's work.